

**Exhibit 2 to Statement of Undisputed Facts Filed in Support of Motion of Hardric
Laboratories, Inc. For Summary Judgment**

RICHARD DEPOSITION EXCERPTS

PART ONE

FILED UNDER SEAL

1 **q.** What is your relationship to Hardric Labs or
 2 Laboratories?
 3 **A.** May I ask a question?
 4 **q.** Sure.
 5 MS. LINDEMANN: Clarification.
 6 THE WITNESS: No, I just want to
 7 know if we're discussing -- because this
 8 business is between '84 and '93, as I
 9 understand it.
 10 MS. LINDEMANN: But he's going
 11 to probably cover a broader background area, so
 12 that's appropriate. So you may answer the
 13 question about your relationship all the way
 14 back.
 15 THE WITNESS: Okay.
 16 MS. LINDEMANN: Yes.
 17 **A.** Currently I own 75 percent of Hardric
 18 Laboratories.
 19 **q.** What is Hardric Laboratories?
 20 **A.** We're a small machining and optics company.
 21 **q.** Where is it located?
 22 **A.** In North Chelmsford, Massachusetts.
 23 **q.** What's the address there?
 24 **A.** 70 Princeton Street.

1 Chelmsford. There were two employees who had
 2 been working for us for many years and could
 3 not move or make that drive to North
 4 Chelmsford. We kept the shop opened there so
 5 that they would continue to have a job, and
 6 finally when one of them died and the other
 7 retired, we closed that plant.
 8 **q.** Would it be fair to say that the operations
 9 that you did at Waltham were the same as those
 10 that took place at Princeton?
 11 **A.** Oh, yes.
 12 **q.** And how many employees altogether would you say
 13 you had from '96 to the present?
 14 **A.** Around 30.
 15 **q.** Three zero?
 16 **A.** Three zero.
 17 **q.** And I asked the question poorly. How many did
 18 you have at any one time? What was the maximum
 19 during that period of time?
 20 **A.** 30.
 21 **q.** Tell me what kinds of operations you maintained
 22 at these locations.
 23 **A.** Waltham evolved into an optics operation. We
 24 did -- made mirrors at that operation, scan

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1 **q.** How long has Hardric done business there?
 2 **A.** Approximately ten years.
 3 **q.** So since roughly '96?
 4 **A.** Roughly.
 5 **q.** Has it from then until now maintained any other
 6 places of business?
 7 **A.** We had a plant in Waltham at 1490 Main Street.
 8 **q.** When was that?
 9 **A.** From 1960 through -- and it was finally
 10 abandoned about three years ago, so the shop
 11 was active there for that period of time.
 12 **q.** So from roughly '96 to 2003 Hardric operated
 13 two facilities?
 14 **A.** Yes.
 15 **q.** Did it operate any other facilities between '96
 16 and the present?
 17 **A.** No.
 18 **q.** What did you do in -- is it Chelmsford or
 19 Chelmsford?
 20 **A.** Chelmsford.
 21 **q.** What did the company do at the Chelmsford
 22 location versus the Waltham location when they
 23 operated simultaneously?
 24 **A.** We moved the majority of our shop to North

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1 mirrors.
 2 **q.** What kind of equipment did you use to do that?
 3 **A.** Lapping machines.
 4 **q.** Anything else?
 5 **A.** Not for that purpose, no.
 6 **q.** Was there any other equipment in use at the
 7 Waltham location?
 8 **A.** Yes.
 9 **q.** What was that?
 10 **A.** There were milling machines and lathes.
 11 **q.** Any other equipment?
 12 **A.** No -- inspection equipment, let me correct
 13 that, all right.
 14 **q.** Were Beryllium-containing products made or
 15 worked on at the Waltham location?
 16 **A.** Yes.
 17 **q.** What types of Beryllium-containing products
 18 were worked on there?
 19 **A.** We made components from Beryllium metal.
 20 **q.** What kinds of metals, if you can identify it
 21 further?
 22 **A.** Beryllium metals.
 23 **q.** Did you work with Beryllium-containing alloys?
 24 **A.** Yes.

1 q. Do you know which ones?
 2 A. Beryllium aluminum composite.
 3 q. Did you work with Beryllium copper at the
 4 Waltham location?
 5 A. In perhaps 1960, '65 time frame, yes.
 6 q. Did you work with any other Beryllium alloys at
 7 the Waltham facility?
 8 A. No.
 9 q. Did you work with any Beryllia or Beryllium
 10 Oxide ceramics at the Waltham facility?
 11 A. No.
 12 q. Turning our attention to the Princeton Street
 13 Chelmsford location --
 14 A. Yes.
 15 q. -- I gather you worked with Beryllium metal
 16 there, as well?
 17 A. Yes.
 18 q. For the entire time that you had a facility on
 19 Princeton Street?
 20 A. Yes.
 21 q. How about Beryllium alloys, did you work with
 22 that at Princeton Street?
 23 A. Aluminum Beryllium composites.
 24 q. Any other Beryllium-containing products used or

1 on or used at the Princeton location?
 2 A. That is correct.
 3 q. How did you come to learn that?
 4 A. I was told that.
 5 q. Who told you that?
 6 A. The employees that work there now.
 7 q. Who told you specifically?
 8 A. Rich Charbonnier. That's Richard.
 9 q. Spell the last name.
 10 A. Charbonnier, C-H-A-R-B-O-N-N-I-E-R.
 11 q. Who owns the other 25 percent of the company?
 12 A. Richard Charbonnier.
 13 q. Any other owners?
 14 A. Currently?
 15 q. Yes, sir.
 16 A. No.
 17 q. When did Mr. Charbonnier get an equity interest
 18 in the operation?
 19 A. About five years ago, six years ago.
 20 q. So right around your retirement?
 21 A. Yes.
 22 q. Prior to your retirement were you 100 percent
 23 owner of the company?
 24 A. Yes.

1 worked on at the Princeton Street location?
 2 A. In what time frame?
 3 q. Well, you said that you operated Princeton
 4 Street from 1996 forward; is that correct?
 5 A. That is correct, yes.
 6 q. From that time frame to the present.
 7 A. We machined some materials, which were a
 8 Beryllium and Beryllium Oxide composite.
 9 q. I'm not sure I know what that is.
 10 A. Neither do I because I wasn't there when they
 11 did it.
 12 q. Well, where were you?
 13 A. I was retired.
 14 q. When did you retire?
 15 A. In 19 -- 2000.
 16 q. So sometime between 2000 and the present --
 17 A. Yes.
 18 q. You've got to let me finish the question.
 19 A. Yes.
 20 q. Sometime between your retirement in 2000 to the
 21 present --
 22 A. Yes.
 23 q. -- you came to learn that some form of
 24 Beryllium Oxide or Beryllium ceramic was worked

1 q. And that would be true from its inception?
 2 A. No.
 3 q. When did the company first begin?
 4 A. The company was founded in 1954.
 5 q. And who was the owner then?
 6 A. My father, Henry Joseph Richard.
 7 q. Where was the company located in '54?
 8 A. In '54, Littleton, Massachusetts.
 9 q. And where did it move from there?
 10 A. To Lincoln, Massachusetts.
 11 q. And from there where did it go?
 12 A. Waltham, Massachusetts.
 13 q. And that was in '60?
 14 A. Yes.
 15 q. 1960?
 16 A. Yes.
 17 q. When did you first have any equity interest or
 18 ownership interest in the business?
 19 A. 1975.
 20 q. Prior to that did your dad own the company?
 21 A. Yes, he did.
 22 q. And in '75 did you become the 100 percent owner
 23 of the company?
 24 A. Yes, I did.

1 **Q.** And you continued to own it in its entirety
 2 until you gave a quarter of it to Mr.
 3 Charbonnier?
 4 **A.** No.
 5 **Q.** Okay. Tell me what other ownership interests
 6 existed prior to Mr. Charbonnier acquiring a 25
 7 percent interest.
 8 **A.** During 1995, I sold a one-third interest to a
 9 man named Jerry Marino.
 10 **Q.** And for how long did Mr. Marino have a
 11 one-third interest in the business?
 12 **A.** For about two years.
 13 **Q.** And what happened to his share then?
 14 **A.** It's a long, complicated story. Would you like
 15 to hear it?
 16 **Q.** No, I really don't.
 17 **A.** I don't either. I don't want to tell it
 18 either, but basically what happened was the
 19 gentleman did something -- some illegal things
 20 having to do with drugs, okay, and we had to
 21 fire him, and then we -- our lawyer, you know,
 22 managed to make a deal where we bought him out,
 23 you know, for the balance of what he -- you
 24 know, of his share of it.

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1 **Q.** So sometime around '97 --
 2 **A.** Yes.
 3 **Q.** -- or so? You have to let me finish the
 4 question.
 5 **A.** I'm sorry. Go ahead.
 6 **Q.** Sometime around '97 or so --
 7 **A.** Yes.
 8 **Q.** -- you reacquired his interest so that you now
 9 had 100 percent ownership again?
 10 **A.** Yes.
 11 **Q.** And you maintained that until giving a 25
 12 percent interest to Mr. Charbonnier?
 13 **A.** Yes.
 14 **Q.** Did you sell the 25 percent interest to Mr.
 15 Charbonnier?
 16 **A.** Yes.
 17 **Q.** And when you -- up until your retirement in
 18 2000, were you in charge of Hardric Labs
 19 operationally?
 20 **A.** No.
 21 **Q.** Can you tell me who was, if not you?
 22 **A.** Yes. We've had several people who are -- have
 23 been foremen over the years or managers. How
 24 many of these people would you like?

1 **Q.** I don't want any of them.
 2 **A.** All right.
 3 **Q.** What did you do at the company prior to your
 4 retirement?
 5 **A.** Primarily I was involved with the production of
 6 optics.
 7 **Q.** And who did you leave or place in charge of the
 8 remaining production of the company?
 9 **A.** That would be Roger Johnson and David Hood.
 10 **Q.** What did each of them do?
 11 **A.** Manage production.
 12 **Q.** Did they have different portfolios in terms of
 13 what products they managed production of?
 14 **A.** Yes.
 15 **Q.** Tell me what they were.
 16 **A.** One gentleman manages the prototype machining
 17 operations.
 18 **Q.** Which one is that?
 19 **A.** And that would be Roger Johnson.
 20 **Q.** Right.
 21 **A.** And the other manages CNC operations. That's
 22 computer numeric control machines.
 23 **Q.** What kinds of machines are those?
 24 **A.** Lathes and milling machines.

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1 **Q.** And what kinds of machines are involved with
 2 the prototypes?
 3 **A.** Lathes and milling machines.
 4 **Q.** When you use the term "prototype" in
 5 contradistinction to CNC, what's the real
 6 difference? What's one doing versus the other?
 7 **A.** No real difference. One is where things are
 8 machined by hand, in other words, by turning
 9 handles, and the other is, you know, the same
 10 thing, but it's run by computers. So one of
 11 the gentlemen understands computer and is able
 12 to program the machine, and the other does the
 13 other.
 14 **Q.** Is Hardric or was Hardric Labs characterized as
 15 a specialty machine shop?
 16 **A.** Oh, yes.
 17 **Q.** Is there some other very general way to
 18 describe what the company does or did?
 19 **A.** No.
 20 **Q.** What other kinds of materials -- we've talked
 21 about some of the Beryllium-containing
 22 materials you worked with. What other kinds of
 23 materials has Hardric historically worked with?
 24 **A.** Refractory metals.

1 q. What would that include?
 2 A. Tantalum, Tungsten, Niobium.
 3 q. Okay.
 4 A. Titanium
 5 q. Right.
 6 A. Aluminum.
 7 q. Right.
 8 A. That's about it.
 9 q. Did the company ever maintain a health and
 10 safety officer or someone principally in charge
 11 of --
 12 A. Yes.
 13 q. -- industrial hygiene?
 14 A. Yes.
 15 q. Who was that?
 16 A. Over 40 years? Who is that?
 17 q. Well, I gather it's more than one person.
 18 A. Yes, indeed.
 19 q. What was the title that was created at the
 20 company for that role?
 21 A. Safety Officer.
 22 q. And did the job duties and functions of the
 23 safety officer at Hardric change over time or
 24 was it primarily the same?

1 A. Yes.
 2 q. Can you just very generally describe the kind
 3 of ventilatory and engineering controls you had
 4 for that process?
 5 A. Yes. We used Spencer vacuum systems.
 6 q. Spencer?
 7 A. Spencer.
 8 q. Right.
 9 A. Vacuum systems, which are essentially big
 10 vacuum cleaners.
 11 q. Right.
 12 A. With bag collectors and HEPA filters, and we
 13 have several of them, and each has a network of
 14 hoses, which reach out to the machines where
 15 you are going to machine, where you machine
 16 Beryllium, and, of course, you have to keep a
 17 vacuum right at the point of machining. That's
 18 essentially it.
 19 q. Did Hardric run a union shop?
 20 A. No.
 21 q. At any time?
 22 A. No.
 23 q. Did someone assist you in designing the
 24 ventilatory system?

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1 A. It's been primarily the same --
 2 q. Tell me what those job duties --
 3 A. -- since '65.
 4 q. Sure. Tell me what that would include.
 5 A. Well, you have to take air samples on a regular
 6 basis.
 7 q. Right.
 8 A. You have to see to the cleanliness of the
 9 facility.
 10 q. Right.
 11 A. You have to make sure that if there's any
 12 emergencies, a spill or anything like that,
 13 that it's cleaned up properly, that air samples
 14 are taken so that you know if there was any
 15 Beryllium in the air at that time, and that's
 16 essentially what it is.
 17 q. I gather that you had ventilation at the point
 18 of operation for --
 19 A. Oh, yes.
 20 q. You have to let me finish the question.
 21 A. I'm sorry. Please.
 22 q. I gather you had ventilation at the point of
 23 operation of all machining of Beryllium-
 24 containing parts; is that correct?

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1 A. Oh, yes.
 2 q. Who was that?
 3 A. Draper Lab -- Charles Stark Draper Lab. We got
 4 into this business because they needed an
 5 outside source for machining of Beryllium.
 6 q. Well -- I'm sorry, I didn't mean to cut you off
 7 if you hadn't completed.
 8 A. No. There were several people, indeed, who
 9 helped us with that.
 10 q. What was the source of the Beryllium that
 11 Hardric worked with? Where did you get it?
 12 A. Oh, initially we worked with a company called
 13 Berylco -- Kawecki-Berylco Industries. They
 14 were the first people to come by to sell us
 15 Beryllium, and they were also very helpful in
 16 setting up that system, and they went out of
 17 business in 1980-ish and left us with a big
 18 contract for which we had no Beryllium, and at
 19 that time we bought Beryllium from Brush
 20 Wellman.
 21 q. So, prior to Kawecki-Berylco, as you say going
 22 out of business in or around 1980, you hadn't
 23 sourced Beryllium material from anybody, but
 24 them?

1 A. I believe from time to time we might have
2 bought something from Brush Wellman. Our --
3 well, that answers your question.
4 q. It does.
5 A. Yes.
6 q. What kinds of products did you start to buy
7 from Brush in or around 1980?
8 A. Beryllium metal.
9 q. Anything else?
10 A. No.
11 q. How about from 1980 going forward to the
12 present, have you bought -- has Hardric bought
13 any other Beryllium-containing product from
14 Brush?
15 A. No.
16 q. From 1980 to the present has Hardric bought any
17 Beryllium-containing products from any other
18 sources or places?
19 A. Yes.
20 q. What other places or sources?
21 A. We had bought a good deal of the material,
22 which we still currently use, because it's
23 inventories, from scrap material that came from
24 the ex-Soviet Union plant in Kazakhstan.

1 other than from Brush Wellman, from 1980 to the
2 present?
3 A. Yes.
4 q. And from whom?
5 A. I cannot remember.
6 q. Do you know, for example, that Kaweck-Berylco
7 had a successor in its operations that sold
8 Beryllium?
9 A. I believe they did not.
10 q. Okay.
11 A. Because, otherwise, they wouldn't have canceled
12 the contract they had with me.
13 q. Did you ever buy Beryllium product from a
14 company called Cabot Corporation?
15 A. Cabot Corporation are the people who bought
16 Kaweck-Berylco Industries.
17 q. But my question, sir, is simply: Did Hardric
18 Labs ever buy Beryllium-containing product from
19 Cabot Corporation?
20 A. No.
21 q. Did Hardric Labs ever buy Beryllium-containing
22 product from NGK Metals?
23 A. No.
24 q. Do you know of any other source or place from

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1 q. How did you acquire that?
2 A. That was imported here as scrap material, and
3 we bought a bunch of it.
4 q. But from whom?
5 A. We bought it from an importer.
6 q. Do you know the name of that importer?
7 A. No -- I do, but I don't remember.
8 q. Was that for some defined period of time that
9 you made those purchases?
10 A. No, that was one purchase.
11 q. A single purchase?
12 A. Yes.
13 q. Apart from the single purchase of scrap
14 Beryllium metal, did you acquire any other
15 Beryllium-containing material from any other
16 source from 1980 to the present, apart from
17 Brush Wellman?
18 A. Can I correct something that you said?
19 q. Absolutely. You can do that at any time.
20 A. Let me back up, then. Okay. We did not buy
21 scrap material. We bought material that was
22 imported as scrap, but it was very high-quality
23 material.
24 q. Apart from that, did you acquire anything,

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1 which Hardric Labs bought any Beryllium-
2 containing material between 1980 and the
3 present?
4 A. No.
5 q. Can you tell me generally -- and I'll ask more
6 specifically as we go through -- what Hardric
7 did with the Beryllium metal that it sourced
8 from Brush Wellman?
9 A. We sold it on the scrap market.
10 q. And give me some flavor of the kinds of
11 customers that you had in that market. Who did
12 you sell to?
13 A. Brush Wellman primarily.
14 q. And when you say or tell me that you sold in
15 the -- you referred to it as the scrap market?
16 A. Yes.
17 q. What do you mean by that exactly?
18 A. Beryllium is used -- Beryllium metal is used as
19 an alloying material for copper, to make
20 Beryllium copper, and I believe that some of
21 the people we sell it to used it for that
22 purpose. I don't remember who they are. The
23 last person I had contact with in terms of
24 selling scrap Beryllium material was to Brush

1 Wellman.
2 **Q.** Okay. But just bear with me, if you don't
3 mind. You've been in this business for a long
4 time, and obviously --
5 **A.** Yes.
6 **Q.** -- I don't know very much about it, but I'm
7 interested to learn more about it.
8 **A.** Uh-huh.
9 **Q.** You would get Beryllium metal sourced to you or
10 purchased by you from Brush Wellman, correct?
11 **A.** (Nods head).
12 **Q.** That's yes?
13 **A.** Yes.
14 **Q.** Okay. And what forms of metal did you purchase
15 over the years from Brush?
16 **A.** Would you clarify that?
17 **Q.** Sure. What was the product that you bought
18 from Brush?
19 **A.** Beryllium metal.
20 **Q.** And what shapes, forms, sizes, types of
21 Beryllium metal products did you buy?
22 **A.** Many different types.
23 **Q.** Can you enumerate some of them for me?
24 **A.** Well, bars.

1 **Q.** Okay.
2 **A.** Blocks.
3 **Q.** And you would get Beryllium metal in bars, and
4 blocks, and perhaps other things, and what
5 would you do with it?
6 **A.** We would cut it up to make mechanical parts.
7 **Q.** And would you do it because you had purchase
8 orders from different customers for such parts?
9 **A.** Oh, yes.
10 **Q.** Okay. And the kinds of customers who ordered
11 this material from you were what kinds of
12 customers?
13 **A.** They were military contractors.
14 **Q.** Such as whom?
15 **A.** Lockheed.
16 **Q.** Okay.
17 **A.** Hughes Aircraft.
18 **Q.** Right.
19 **A.** Texas Instruments, Israel Aircraft, Japan
20 Aviation Electronics. That's all.
21 **Q.** In instances where you would do work for these
22 aviation aeronautics-type companies and you got
23 Beryllium metal in some form or fashion from
24 Brush Wellman, was it always the case or just

1 sometimes the case that you would do the
2 machining -- the specialty machining and then
3 send it directly back to the aviation company
4 or were there instances where it went somewhere
5 else before going back to those companies?
6 **A.** I'm not sure I understand.
7 **Q.** That's fine. I'll ask it again. The orders
8 that you took from these companies --
9 **A.** Yes.
10 **Q.** -- I gather you machined the Beryllium metal?
11 **A.** Yes.
12 **Q.** And then you sent the finished product per the
13 specs to you back to the company?
14 **A.** That is correct.
15 **Q.** Did you ever get jobs from Brush in which metal
16 was sent to you, it was machined or finished in
17 some way, and then sent back to Brush?
18 **A.** No.
19 **Q.** Correct me if I'm wrong, but I thought you had
20 expressed to me that among the customers you
21 had when you machined this Beryllium metal was
22 Brush itself. I did not hear you correctly?
23 **A.** You heard me incorrectly.
24 **Q.** So that literally Hardric's relationship with

1 Brush at least from 1980 forward was simply one
2 of supplier of Beryllium metal to you as a
3 specialty machine shop?
4 **A.** That's correct.
5 **Q.** In order for Hardric to meet its purchase
6 orders, specifications from its own customers,
7 correct?
8 **A.** Correct.
9 **Q.** Take a customer or former customer like
10 Lockheed, what kinds of Beryllium-containing
11 products would you make for it?
12 **A.** Optics.
13 **Q.** Okay.
14 **A.** Or components relating to optics.
15 **Q.** As to some of the other customers or clients
16 that you identified, did you make for them
17 anything other than optics?
18 **A.** No.
19 **Q.** Did you ever obtain Beryllium metal or
20 Beryllium material of any kind from any company
21 and make products other than Beryllium-
22 containing optics?
23 **A.** I'm sorry, could you repeat that for me?
24 **Q.** Sure. You've told me to this point --

1 A. Yes.
2 **q.** -- that Hardric made Beryllium-containing
3 optics, correct?
4 A. Yes, that's correct.
5 **q.** And you cited in response to one of my
6 questions optics that you had made for Lockheed
7 as a specific example.
8 A. Yes.
9 **q.** Did Hardric Labs ever obtain Beryllium metal,
10 which it then fabricated into a product other
11 than for optical or optics use?
12 A. Oh, yes.
13 **q.** What other uses did you make or put to the
14 Beryllium metal that you sourced from Brush and
15 other companies?
16 A. You are going to have to forgive my ignorance
17 in this business because, of course, most of
18 the time they didn't tell us what the stuff was
19 for.
20 **q.** Well, I didn't ask you what use was made of the
21 stuff. I only asked you what you made. And
22 that may not be --
23 A. Oh, I see, I see. Are you finished?
24 **q.** What else did you make other than Beryllium-

1 **q.** Any other products that Hardric made?
2 A. Probably.
3 **q.** Can you think of any, apart from the four that
4 you've told me?
5 A. No. You must understand that often we didn't
6 know what we were making. People send us
7 drawings. It's a gizmo. You manufacture it,
8 and you send it to them. I don't know what it
9 is.
10 **q.** Right.
11 A. Yeah.
12 **q.** But you call it something even if it's just --
13 A. It has a title, yes, but the titles are
14 meaningless.
15 **q.** Mr. Richard, you're going to have to let me
16 place the question on the record.
17 A. Go right ahead. I apologize.
18 **q.** That's okay.
19 A. Go ahead.
20 **q.** But, regardless of what the companies who hired
21 you to make them --
22 A. Yes.
23 **q.** -- called the parts --
24 A. Yes.

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1 containing optics?
2 A. We made gimbals.
3 **q.** What else?
4 A. We made components for holding optics.
5 **q.** What else?
6 A. That's about it.
7 **q.** Were the gimbals products that contained
8 Beryllium in them?
9 A. Yes, they were Beryllium gimbals.
10 **q.** And were the components for holding optics made
11 of Beryllium metal?
12 A. Yes.
13 **q.** Can you think of any other products or product
14 lines that Hardric ever made --
15 A. Ever made?
16 **q.** Ever made for anyone, apart from the three that
17 you have told me about?
18 A. Yes.
19 **q.** What other products did it make?
20 A. All right. From say 1965 through the early
21 '70's we manufactured gyro parts for Draper Lab
22 and for Northrop Nortronics.
23 **q.** Did the gyro parts contain Beryllium?
24 A. They were made out of Beryllium.

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1 **q.** -- or regardless of what you state they put the
2 parts to --
3 A. Yes.
4 **q.** -- you had a way to identify them, correct?
5 A. By part number.
6 **q.** Okay. And at least internally Hardric could
7 distinguish the kinds of parts you were being
8 asked to make; in other words, some were
9 gimbals, some were optics, some were components
10 for holding optics. You could at least
11 categorize the part in some way; could you not?
12 A. Some of them.
13 **q.** And have we identified, as best as you can,
14 recognizing the uncertainty because you don't
15 know what the parts were used for, the
16 different categories of parts that Hardric
17 manufactured?
18 A. You are going to have to repeat this one.
19 **q.** Well, let me ask you this: Do you know what a
20 bushing is?
21 A. Yes, I do.
22 **q.** Did you ever make bushings at Hardric?
23 A. No one ever made a bushing out of Beryllium.
24 **q.** Let me assure you they have, but --

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1 A. All right. Well, I can't see how they would,
2 but, indeed, if you know better, go ahead.
3 **q.** At any rate, you didn't make bushings.
4 A. No.
5 **q.** Did you make any other aviation or aeronautical
6 parts, to your knowledge, that contained
7 Beryllium or Beryllium alloy?
8 A. Other than guidance system parts, gimbals, and
9 that sort of thing? No, no.
10 MR. HONIK: Why don't we take
11 about a four-minute break.
12 (Short break was taken.)
13 **q.** Mr. Richard, are you ready to proceed?
14 A. Yes.
15 **q.** You mentioned earlier to me that apart from
16 perhaps some involvement with Beryllium ceramic
17 after your retirement, that Hardric Labs did
18 not work with Beryllium Oxide; is that correct?
19 A. That's correct.
20 **q.** Is there a reason it didn't?
21 A. Yes.
22 **q.** What is that reason?
23 A. That reason goes back to 1965.
24 **q.** Okay.

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1 A. We were a company of about six people, and I
2 was one of the people that, indeed, worked on
3 the floor and made things. I only had a
4 secretary in the office and, you know, those of
5 us who worked.
6 Draper Lab sent some people over
7 to our plant. We did experimental machining
8 is -- that's what we did. They said they
9 needed somebody to help them or take overloads
10 from their Beryllium machining facilities, and
11 would we be interested in doing that? And
12 since we are already familiar with what
13 Beryllium was and the fact that it was a toxic
14 material, you know, we were a little reluctant,
15 and they gave us an option to do two things:
16 First, we could do Beryllium Oxide ceramic or
17 we could do Beryllium metal.
18 The feeling at the time was that
19 Beryllium Oxide was incredibly more dangerous
20 than Beryllium metal, and nobody in our
21 facility wanted to machine it. So we decided
22 at a very, very early time that we would not
23 machine Beryllium Oxide.
24 **q.** Who had the belief or understanding that

1 Beryllium Oxide was more dangerous than
2 Beryllium metal, the people at Draper Lab?
3 A. The people at the Beryllium Registry here in
4 Boston.
5 **q.** Well, what did you and the folks at Hardric
6 come to learn about the dangers associated with
7 Beryllium Oxide when you declined to work with
8 it?
9 A. Well, evidently the only contaminant found in
10 people's lungs who had Beryllium disease was
11 the oxide of Beryllium. Metallic Beryllium was
12 never found in anybody's lungs.
13 **q.** Did you have a belief that was formed then or
14 subsequently that Beryllium metal somehow was
15 not dangerous?
16 A. Oh, no. Oh, no. We thought Beryllium metal
17 was dangerous, and we were very careful how we
18 machined it, and we were told to keep it out of
19 the air, to make measurements to make sure that
20 any new operations we were doing were clean,
21 and that's what we did.
22 **q.** So I gather presented with the choice by
23 Draper, you never, in fact, machined, not even
24 a single day, Beryllium Oxide; is that correct?

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1 A. That is correct.
2 **q.** Did Draper tell you at that time that some
3 special controls would need to be put into
4 place in order to machine Beryllium Oxide?
5 A. They told us that special vacuum systems,
6 whatnot, safety systems would have to be put in
7 place to machine Beryllium metal.
8 **q.** And those are the systems you put into place?
9 A. Yes.
10 **q.** The Spencer vacuums you told me about?
11 A. Yes.
12 **q.** Do you know whether or not either from Draper
13 or from some other source you learned whether
14 any special or additional precautions were
15 required to machine Beryllium Oxide?
16 A. No.
17 **q.** Is that no, you didn't learn of any?
18 A. I don't know anything about Beryllium Oxide,
19 very frankly.
20 **q.** Fair enough. Did there come a time that
21 Hardric Labs sold Beryllium-containing product
22 to Raytheon?
23 A. Evidently because the data shows that
24 (Indicating).

1 q. Okay.
2 A. But I don't remember it.
3 q. I understand, and we're going back certainly a
4 long ways.
5 A. Yes. In fact, I was astounded when they showed
6 me that.
7 q. Let me give you another instruction. This is
8 as good a time as any. I'm going to ask you
9 questions about events and things and documents
10 that took place a long time ago.
11 A. Uh-huh.
12 q. And certainly you don't have to provide
13 responses to me based solely on your present
14 recollection. You can tell me that you know
15 something because you looked at a document.
16 Just tell me that's how you know.
17 A. Uh-huh.
18 q. Or if you don't remember something perfectly or
19 with definite, you can just tell me that you
20 are giving me your best recollection.
21 A. Uh-huh.
22 q. Or an estimate or an approximation. As long as
23 you're not guessing, it's okay to respond to my
24 questions. Do you understand that instruction?

1 you know, Brush Wellman material at our plant
2 for us to process and then sell to Raytheon.
3 q. So it was some constellation of documents that
4 you saw that caused you to believe that?
5 A. Yes.
6 q. Using the categories of products that you have
7 told me that Hardric has made over the years --
8 A. Uh-huh.
9 q. -- and based on your review of these documents
10 and any other research or investigation you may
11 have done --
12 A. Uh-huh.
13 q. -- into which category of those products would
14 you place the products that were sold to
15 Raytheon by Hardric?
16 A. I would have placed them in the category of --
17 MS. LINDEMANN: Objection.
18 A. -- I had no idea what the heck they were.
19 q. Okay. Well, based on your review of the
20 documents and whatever research you may have
21 done --
22 A. Yes.
23 q. -- what -- how would you describe the products
24 that Hardric apparently sold to Raytheon?

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1 A. Yes.
2 q. What documents did you see, Mr. Richard, that
3 causes you to now believe that Hardric Labs had
4 sold some Beryllium-containing products to
5 Raytheon?
6 A. I'm sorry, repeat that.
7 q. What did you look at --
8 A. Yes.
9 q. -- that allows you to know today --
10 A. Yes.
11 q. -- that Hardric Labs sold some Beryllium-
12 containing products to Raytheon?
13 A. I saw a letter from I believe it was Tom
14 Parsonage talking about the fact that we -- he
15 didn't think we could afford to machine this
16 product I think because they had to supply the
17 product to us. In other words, we couldn't
18 afford to buy it, so they supplied it to us.
19 They wanted somebody else to make it who could
20 buy it from them, see.
21 So, I believe Raytheon bought
22 it, and I think we saw some purchase orders
23 from Raytheon to Brush Wellman, okay, saying
24 that they would drop ship some material that --

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1 A. Okay.
2 THE WITNESS: Is hearsay okay
3 here?
4 MS. LINDEMANN: Hearsay is okay
5 here, yeah, go ahead.
6 A. I heard tell that these products were for a
7 project called the Aegis Missile System, okay,
8 which was something that was developed for the
9 Navy.
10 q. Okay. That's your response?
11 A. That's my response.
12 q. Who told you that?
13 A. A gentleman who worked for Phoenix Machine, who
14 are the successor to manufacturing those parts,
15 and who worked for them for many, many years
16 and who now works for us.
17 q. Phoenix Machine succeeded whom?
18 A. Well, they are the people who subsequently
19 manufactured all those whatever they are.
20 q. The whatever they are being products that for
21 at least some period of time Hardric made for
22 Raytheon, correct?
23 A. Evidently.
24 MS. LINDEMANN: Yeah, objection.

1 the way. So, indeed, if you saw a Beryllium
 2 bearing, it probably had nickel on it.
 3 Anodize, nickel. That's about it. Erudite.
 4 **Q.** Now, the four processes that are described or
 5 written here, are they processes that would be
 6 done to the rings at the point that they are
 7 fabricated, whether at Hardric or somewhere
 8 else or once they go to the customer?
 9 **A.** Which process?
 10 **Q.** Rough machining, stress relieving, Indium
 11 plating, and finish machining.
 12 **A.** Okay. That, indeed, except for the indium
 13 plating, is the process that you would follow
 14 to manufacture anything from Beryllium.
 15 **Q.** Correct. So that -- those are not steps or
 16 processes that would be done by the customer
 17 getting, in this case, the rings, correct?
 18 **A.** That is correct.
 19 **Q.** Okay. When you have at Hardric --
 20 **A.** Yes.
 21 **Q.** -- manufactured or machined tubular or
 22 cylindrical or similar shape parts in the
 23 complicated machining way that you've described
 24 to me --

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1 **A.** Uh-huh.
 2 **Q.** -- are they typically, if not always, made a
 3 part -- a component part of some other product?
 4 **A.** Yes.
 5 **Q.** And in your experience in order to make that
 6 component part fit with the larger assembly or
 7 whatever part is being put together, does there
 8 sometimes, all the times, have to be further
 9 machining of the product or handling or filing
 10 or some process to make it fit?
 11 **A.** Anything is possible.
 12 **Q.** Okay.
 13 **A.** What generally happens if we make something to
 14 a specification --
 15 **Q.** Right.
 16 **A.** -- an inspector comes from the plant -- it's
 17 called source inspection, comes from the
 18 customer's plant and inspects the stuff on our
 19 floor and then approves it from our plant. It
 20 would then go to the customer's plant, say
 21 Hughes Aircraft in this instance, a big
 22 cylinder part. They would then inspect it in
 23 their plant. If it was found wanting, they
 24 would either send it back or repair it in their

1 plant, but Hughes Aircraft machined more
 2 Beryllium than we did. So they knew how to do
 3 it. So they would, indeed, do it.
 4 Normally if anything were wrong,
 5 they would return it because it's Beryllium.
 6 Nobody wants to do that in their plant, you
 7 know. It's dangerous stuff, so it's returned
 8 to us, and if there is any corrections or any
 9 changes in designs because this happens a lot
 10 where engineers originally designing something,
 11 you know, make mistakes, and there are
 12 engineering changes and whole varieties of
 13 things like that that a company like Hughes
 14 Aircraft, which they make these things all the
 15 time, you know, this is nothing new to them,
 16 and so that process is very well-defined for
 17 them, and if it's an engineering kind of a
 18 thing, you know, it's -- well, I don't know. I
 19 think that's as much an answer as I think I can
 20 give you.
 21 **Q.** Well, Mr. Richard, do you know whether or not
 22 emitter rings, such as those that are the
 23 subject of this exhibit that we're looking at
 24 together, when they are fitted into power

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1 tubes, if they have to be processed in any
 2 further way to be made to fit?
 3 **A.** I don't know.
 4 **Q.** Have you worked on projects where shapes that
 5 you have machined, whatever the shapes may be,
 6 indeed, undergo further processing, machining,
 7 hand grinding, filing, whatever, in order to
 8 fit within some larger component part?
 9 **A.** Do I know?
 10 **Q.** Has that ever happened in your experience at
 11 Hardric where you made such a part that you
 12 knew would undergo further processing?
 13 **A.** No.
 14 **Q.** You don't know of any instance in which that
 15 happened?
 16 **A.** No.
 17 **Q.** When you would perform machining operations --
 18 **A.** Yes.
 19 **Q.** -- at the request of customers on shapes of
 20 whatever size or type, would you send that part
 21 out with warnings?
 22 **A.** Yes.
 23 **Q.** And did you do that in every instance where the
 24 part contained Beryllium?

1 A. Yes.
 2 **q.** And why did you do that?
 3 A. Because Beryllium is dangerous, and we don't
 4 want our customers filing it or grinding it or
 5 doing anything to it.
 6 **q.** Well, do you know of any instance where by
 7 design, by intent products that you would
 8 manufacture or machine would go to customers
 9 where they had to file or grind or machine the
 10 product further?
 11 A. No.
 12 **q.** You don't know of a single instance where that
 13 occurred?
 14 A. No, no.
 15 **q.** And how would you come to design and employ
 16 warnings labels on your products? Where did
 17 you get them from?
 18 A. Get them printed.
 19 **q.** Where would you get the content or language for
 20 them to copy?
 21 A. That copy came from very early government
 22 regulations for shipping Beryllium.
 23 **q.** And did you continue to use those labels
 24 containing that language throughout the

1 include the words "warning," you know,
 2 "Beryllium," and then they have, you know,
 3 their own numbers and whatever so that it gets
 4 routed to a special place in a plant like
 5 Hughes.
 6 **q.** In this instance you don't know of any specific
 7 warnings or labels that were sent to Hardric by
 8 Raytheon to be used for any products to be sent
 9 to them, do you?
 10 A. In this period of time? (Indicating)
 11 **q.** At any time.
 12 A. Yes.
 13 **q.** What kinds of label or label instructions did
 14 you receive from Raytheon?
 15 A. Currently they have a process by which you have
 16 to provide the information that they provide on
 17 their purchase order and other papers, which
 18 they send, that require a label, and the label
 19 has to have specific information on it, okay,
 20 and one of those is the fact that it's
 21 Beryllium.
 22 **q.** Okay.
 23 A. Now, they are specified. We can't do anything
 24 else, but put that label on it. We also stick

1 duration of time that you were at Hardric?
 2 A. Yes.
 3 **q.** Did the content of the labels, the copy change
 4 at all over time?
 5 A. No.
 6 **q.** It was always the same?
 7 A. Yes.
 8 **q.** So what you used in the '80's you used in the
 9 '60's, is that right, the language?
 10 A. Yes.
 11 **q.** And what you used in 2000 you used in the
 12 '80's, as well?
 13 A. Yes.
 14 **q.** And I'll ask you some more questions
 15 specifically when we look at the labels that
 16 have been provided to us, but would you affix
 17 the label to the product or some wrapping or
 18 packaging of the product?
 19 A. A label goes inside the product with the
 20 product --
 21 **q.** Right.
 22 A. -- and on the packaging outside, and then
 23 normally, I would say most of the time, our
 24 customer sends us label instructions, which

1 one of those on them (Indicating).
 2 **q.** Referring to your own labels, Hardric labels?
 3 A. Yes.
 4 **q.** The ones you have always used?
 5 A. Yes.
 6 **q.** When Raytheon has these labeling requirements
 7 for their own material, do they supply the
 8 labels or --
 9 A. Sometimes. Sometimes.
 10 **q.** Are there other times that you have to make or
 11 design labels for Raytheon?
 12 A. Well, we don't have to design them, but we have
 13 to put the information on a label (Indicating).
 14 **q.** Do you have any knowledge or recollection today
 15 of the kind of labeling or cautions that may
 16 have accompanied the tubes which are the
 17 subject of this exhibit?
 18 A. I have no direct knowledge because I don't
 19 remember the parts.
 20 **q.** Turning to the next page, Genereux 800, in
 21 Exhibit 1, it's another similar purchase order,
 22 this one dated 1/8/85, again, for Beryllium
 23 tubes per Brush, quantity being 50; do you see
 24 that?

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1 q. What did you do for them?
 2 A. Essentially the same thing. Our involvement
 3 with Israel Aircraft was, you know, a good deal
 4 less than it was for the Chinese. We didn't
 5 actually design anything for them, but they
 6 came to our shop and, you know, looked at what
 7 we did, and we -- you know, we explained how to
 8 keep Beryllium out of the air, you know, the
 9 same kinds of things, how you take care of the
 10 gray water used from washing, you know, how all
 11 these things are done.
 12 q. How to protect your workers?
 13 A. Yes.
 14 q. Did you ever go to their facility?
 15 A. No, I never did. I have never been to Israel.
 16 q. Did you consult with any other companies,
 17 besides --
 18 A. No, that's it.
 19 q. Just those two?
 20 A. Yeah.
 21 q. Have you ever sought to do any Beryllium health
 22 and safety consulting work since your work for
 23 the Israeli company?
 24 A. No. I don't advertise, you know, as somebody

1 to your knowledge, but you weren't denying that
 2 that may have happened, were you?
 3 A. No, that may have happened. I have no way to
 4 know, Frances, what they did with stuff we made
 5 and sent to them.
 6 q. So it is possible --
 7 A. We think we're manufacturing finished goods
 8 because that's what we're in the business of
 9 doing once it leaves our plant, you know. If
 10 Hughes Aircraft decided they wanted to put a
 11 hole someplace, they were perfectly capable of
 12 doing it. They had the facilities to do
 13 anything they wanted, and what we got was the
 14 stuff that they couldn't process themselves.
 15 It was either that or a speed ring, which was
 16 the other, you know --
 17 q. So you're not denying that they may have been
 18 changed once they went to --
 19 A. No.
 20 q. -- the buyer?
 21 A. No. Anything is possible, Frances.
 22 q. When you were explaining how you didn't have
 23 salesmen really, you did have -- that was more
 24 of a structure of how the company is run, isn't

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1 who is a real expert in this. I don't have the
 2 medication for it, just practical experience.
 3 q. What education do you have?
 4 A. Well, I have a degree in business, but I spent
 5 my life as an engineer.
 6 q. Is that a college degree?
 7 A. Yeah.
 8 q. Where did you go to college?
 9 A. Merrimack College.
 10 q. What year did you graduate?
 11 A. '66.
 12 MR. UBERSAX: Those are all the
 13 questions I have.
 14 MS. BRYANT: I have no
 15 questions.
 16 MS. LINDEMANN: I have a couple
 17 of questions just to clarify.
 18 THE WITNESS: Go ahead, yes.
 19 CROSS-EXAMINATION BY MS. LINDEMANN
 20 q. A couple of times Mr. Honik had asked you about
 21 what happened to the parts after they left your
 22 plant and whether they were -- and any changes
 23 were made to them or they were installed, and
 24 your -- my understanding of your answer was not

1 it? I mean, there were people who were
 2 procuring orders?
 3 A. Well, there were people writing orders. We had
 4 a reputation for the kind of work we do, very
 5 good reputation, you know, for doing fine
 6 experimental machining, and, you know, people
 7 all over the country because we did a lot of it
 8 for MIT and Draper Labs, and those engineers
 9 went everywhere.
 10 And so we had a good reputation,
 11 and so we didn't have to have somebody -- a
 12 salesman on the road. I did some of that when
 13 I was in college, but that was so my dad could
 14 keep me eating, you know.
 15 We had a rep on the West Coast.
 16 Today we have reps, but in those days we were
 17 too small to even, you know -- we stayed busy,
 18 and who needed to pay a salesman?
 19 q. To your knowledge, was Hardric ever an approved
 20 vendor for Raytheon Waltham?
 21 A. No, no. They thought we were a joke.
 22 q. But you don't deny -- you have seen the
 23 documents. You don't deny that there was some
 24 job done where the Beryllium was paid for by

1 Raytheon Waltham?
 2 A. Right. We were machining Raytheon's material.
 3 Q. Right. It was described as emitter rings?
 4 A. Yeah. The evidence is there.
 5 MS. LINDEMANN: No more
 6 questions.
 7 REDIRECT EXAMINATION BY MR. HONIK
 8 Q. Mr. Richard, your Hardric's warning label says
 9 that hazardous dust can be produced when it's
 10 machined, filed or ground.
 11 A. Yes.
 12 Q. Is that a belief that you've always held?
 13 A. Oh, yes.
 14 Q. And certainly you held that belief in the
 15 '1980's, correct?
 16 A. Yes, I did.
 17 Q. You've already told your own lawyer that you
 18 can't deny, because you don't know, what may
 19 become of a product that you send out as a
 20 finished component part once it gets to the
 21 customer, correct?
 22 A. That's correct.
 23 Q. You don't know if it can undergo further
 24 machining or filing or grinding, correct?

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1 A. I don't know.
 2 Q. But you know that such processes are possible
 3 at some, if not all, of the customers that you
 4 have shipped to historically, correct?
 5 A. Yes. I will qualify that, though. Most of the
 6 people to whom we send Beryllium parts,
 7 Beryllium products, okay, have their own
 8 Beryllium facilities for machining. We take
 9 their overload. The things they can't produce,
 10 too busy to produce, that's what we get.
 11 Now, if it's a company like
 12 Hughes Aircraft or Lockheed Martin, they -- you
 13 know, I don't know what they do with the stuff
 14 after it gets there, but they are eminently
 15 qualified to machine this stuff.
 16 Q. Right. And would that be true for Raytheon, as
 17 well?
 18 A. I would assume so, but I don't know that.
 19 Q. And the reason products left Hardric's hands
 20 with a warning label was to warn the receiver
 21 that machining, filing or grinding the product
 22 could produce dangerous dust?
 23 A. Yes.
 24 Q. And did you understand -- "you" meaning

1 Hardric -- that in affixing a warning label to
 2 your product that you were informing -- doing
 3 an important job of informing your customer of
 4 that hazard?
 5 A. We were hoping that that was the case.
 6 Q. Right. And did Hardric know that you had to
 7 give adequate warnings when accompanying
 8 products sent by your lab?
 9 A. Yes.
 10 Q. And you knew that you had to spell out with
 11 sufficient clarity what those risks were,
 12 correct?
 13 A. Yes.
 14 Q. And what the nature and extent of those risks
 15 were, correct?
 16 A. Well, we don't know what the extent of the
 17 risks are, so that would be -- we know it's
 18 hazardous to get the dust in the air, and our
 19 label is designed to tell people that.
 20 Q. So far as you know, did Brush Wellman supply to
 21 Hardric any labels or cautions or warnings that
 22 accompanied the tubes and other material that
 23 you obviously forward on to Raytheon?
 24 A. Everything that I ever saw come in my plant

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1 from Brush Wellman was accompanied by their
 2 safety sheet.
 3 Q. Material Safety Data Sheet?
 4 A. Yeah.
 5 Q. Did the material received by Hardric from Brush
 6 also contain separate warning labels on them or
 7 cautions?
 8 A. Just a warning label that's in every package.
 9 You had a picture of it here someplace. Every
 10 package just like we do, they affix a label.
 11 Q. And did you incorporate any of Brush's material
 12 when you --
 13 A. Often we send that along with the material
 14 (Indicating). We send a safety data sheet,
 15 too. It says the same thing. It's a copy of
 16 this (Indicating).
 17 Q. Do you know if you did in the instance of the
 18 Beryllium tube?
 19 A. Particularly and specifically? No.
 20 Q. Were you paid for any of the consulting work
 21 that you did either --
 22 A. Yes. I'm sorry, go ahead.
 23 Q. -- either for the Chinese or the Israelis?
 24 A. Yes.